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1909?

U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF FRUIT CULTURE

NOV 1 1910 \*

U. S. Department of Agriculture

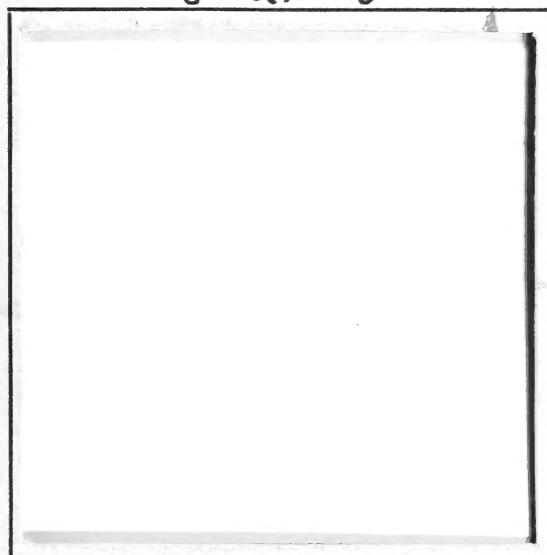
# Descriptive Walnut Catalogue

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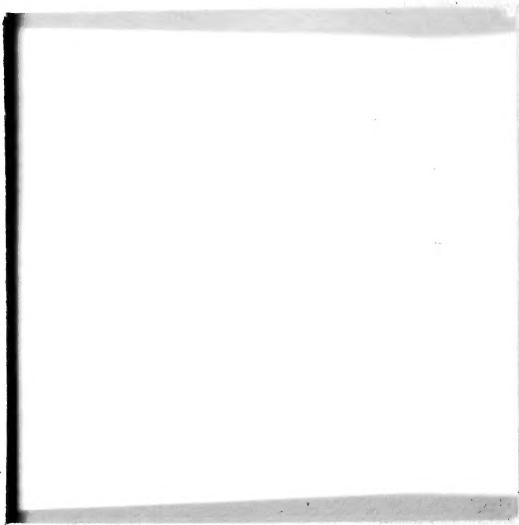
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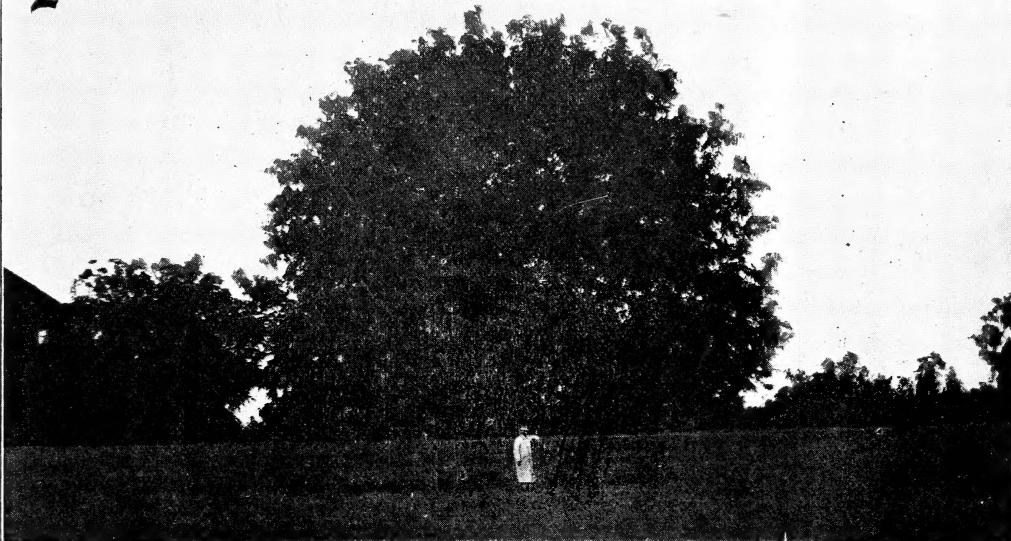


Imperial Walnut Nursery  
San Jose, California



# **DESCRIPTIVE WALNUT CATALOGUE**

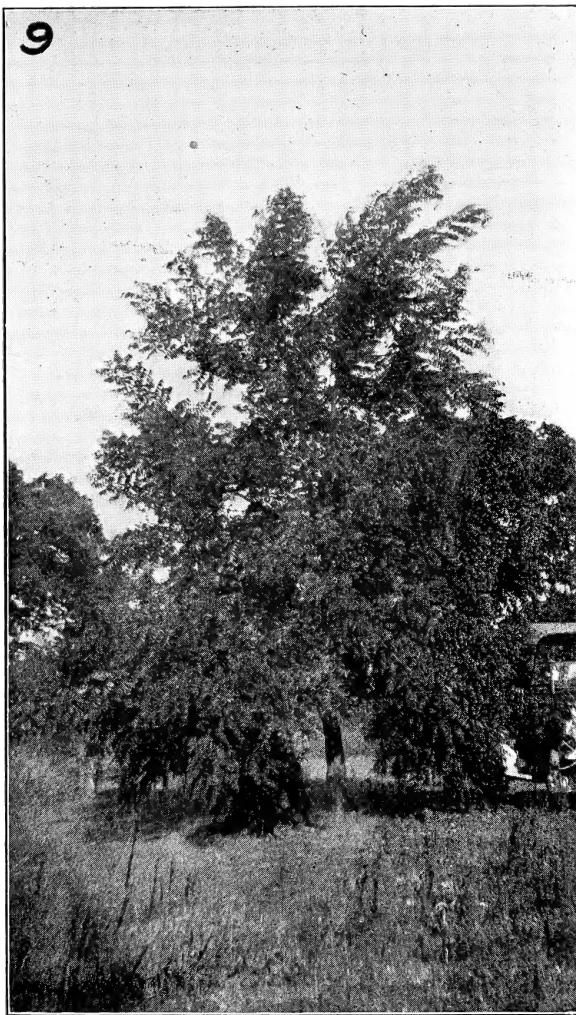
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Payne grafted tree. Planted in 1876. Grafted in 1893. Bore 712 pounds of nuts in 1908, which sold for \$99.75.

**Imperial Walnut Nursery**  
**R. F. D. No. 7**      **San Jose, Cal.**

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Six year old Royal seedling, (No. 3). Eleven inches in diameter.

**D**URING the last seven years, we have had numerous inquiries concerning walnut growing.

One of the most frequent has been, "Will not walnuts soon be overproduced as has been the case of various fruits from time to time?" The best way to answer this, is to submit the following tables, obtained at the United States custom house, (See Year Book of the United States Department of Agriculture, 1909.) :

Year	Pounds Imported	Valuation
1904	23,670,761	\$1,729,378
1905	21,684,104	1,469,463
1906	24,917,028	2,193,658
1907	32,597,592	2,969,649
1908	28,887,110	2,765,486

On this importation, five cents per pound for shelled and three cents per pound for unshelled walnuts was paid, the above figures including both shelled and unshelled nuts.

And these imports have been steadily growing in spite of increasing interest and consequent heavy planting during the last decade. And when the full-meat ed, delicious, California and Oregon grown Franquette and Mayette are generally known, many new nut consumers will be formed from a large class, who at present do not eat walnuts because of the tang or bitterness so often found in the brown meated nuts now commonly found throughout the grocery stores of the United States. The fact that California Franquettes have been bringing eighteen to twenty-three cents per pound during the last few years when Santa Barbara seedling nuts were only bringing ten to thirteen cents shows the profit and satisfaction in growing

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No. 1 Paradox, grown on Imperiale Walnut Orchard. Six years old.

the best that has been grown in France for 160 years  
the Franquette.

Certainly, on the Pacific Coast, the walnut far excels in commercial importance and possibility all other nuts. No other tree is so long-lived or requires so little care. None other is so free from insect pests. In our valley and through this State it reaches immense proportions. One example will suffice. The Payne grafted tree, grown in our valley, averages about 67 feet spread and is about three feet through at the base. The California nut was planted in 1876, was grafted in 1893, and has been bearing heavy crops for the past 13 years. Last year it produced 712 pounds of nuts. These nuts are inferior to the Franquette, yet they brought \$99.75. Nine such trees would comfortably fill an acre, which at this rate would produce \$891.00 to the acre. And this in Santa Clara Valley, where people in general still think that walnuts can not be grown successfully outside of Southern California! Some day she should be as famous for her Mayettes and Franquettes as she now is for her prunes. The important things in planting a successful walnut grove are, proper selection of climate, soil, variety, root and grafts.

Climate and soil, each man can generally determine for himself. If he finds a walnut tree growing and fruiting well in his vicinity, he can easily determine the fitness of his particular land. The least he can do, is to plant one or two Grafted Franquettes somewhere around his house, which will not only tell him what his land is worth for walnut purposes, but will, if climate and soil be proper, furnish him with delightful shade and delicious nuts.

The selection of root is the most important of all. On it depends the entire success of the orchard, and so we have spent, and are spending a great deal

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Oct. 10, '09 Imperiale Walnut Orchard. Another species of paradox (No. 1) in its second year from the graft. Used to pull up a weak tree.

of time in its testing out and improvement. It can be planted but once, and when planted has to adapt itself to heavy, damp soils, light, dry, sandy ones, etc., and if it is the ideal root, it can withstand a moderate amount of either drouth, or excess moisture. On it depends the growth, vigor and consequent bearing of the variety with which it is grafted. To find this ideal root, we have tried English, Circasian, French, Eastern, Bolivian, Paradox, California and Royal seedlings. Let us briefly point out the weakness, if it has any, of each. The English and French roots are too slow growing, and will not stand close surface water. Circassian and Eastern roots are too slow growing, but the Eastern has the property of growing in very moist places. Bolivian is also a little too slow, and is caught by the autumn frosts. It will stand even more water than the Eastern. Paradox roots are exceedingly variable, some being immense growers, some being only mediocre, but they are only adapted to dry or well drained soils as they will no more stand close surface water than one of its parents, the English. This leaves us then the California and the Royal seedlings, the two roots best adapted to California, Oregon and Washington conditions. The California seems to include two distinct species, known familiarly as California Northern, and California Southern. The former is the variety found widely throughout the Sacramento and other valleys of the Central and Northern part of the State, and the other is found quite commonly as bushy trees in the dry sandy soils of Southern California. The California Northern is the variety that has been mostly used and tested, even in Southern California; and will probably stand more of excessive moisture, and heavier soils than the Southern variety; but we are not yet prepared to say that some particularly fine specimens of the Southern Variety may not

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Oct. 10, '09 Imperiale Walnut Orchard. One year's growth of one specimen of "Paradox". (R) when grafted on a weak 5 year California root. Showing its immense value as a tonic and forcer of a weak root. This growth of one year is 14 ft. in height and 8 ft. in spread.

furnish as good or a better root than many of the Northern nuts now used. The California Northern will always be a favorite, as it flourishes in a wide variety of soils and climates. We use only nuts of this variety which we have proven to produce strong, vigorous trees. But the nuts of certain of our \*Royal Hybrid trees we believe to surpass anything in the walnut line for sturdiness, adaptability and rapid growth. Varieties grafted on it, bear nuts with a peculiarly sweet, delicious meat. These roots will stand as much water as the Eastern parent, but grow very much faster than either it or the California. We believe that a cross of it and the Bolivian may still further increase its ability to grow where surface water is close, and probably increase its rapid-growing qualities.

But even with these nuts we exercise the great-

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\*A Royal Hybrid is a direct cross between any specimen of the Black California and any specimen of the Eastern Black Walnut. So far as we know, the name was first applied by Mr. Burbank to such a cross which he made in 1878. This tree is still growing and is a magnificent specimen. A considerable number of such crosses (made by nature from the juxta-position of California and Eastern trees) and their seedlings, exist in this state. The direct crosses especially those which have the California type of leaf, are very strong growers. But the cross is unstable and owing to very few of such crosses producing seed which in turn grow trees as rapid growing as the parent, it is a matter of considerable experiment to find specimens sufficiently fixed to furnish nuts for nursery purposes. At present we know of and use only four such specimens, although we expect, of course, to get many others, in time, either by discovery or from the crosses we are making.

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**Two year old Bolivian Walnut Graft.**

est selection. By a system of sprouting our nuts before planting, we eliminate and throw out from four-fifths to one-half of what would be weaker growing trees, if all the nuts were planted, as is the general nursery rule. A further selection is made at the end of either one or two years, depending on the size of the tree desired for planting. The demand in Southern California, has been for large trees, while Oregon and Northern California seem to prefer the younger, medium sized trees. We therefore graft the best of the one year old seedlings for the medium sized tree, and throw out the poor ones as unworthy to be grafted; and for the larger trees, we let the whole lot grow two years, selecting as before, the best trees only, and discarding the others. Thus we put out trees of the same age, as uniform as is possible. We graft only from a fifth to a half of all the trees we grow, depending on the stock used.

So much then, for the foundation of success, the root.

In the selection of our variety, and scions of that variety, we have tried to be just as careful. We selected the Vrooman Franquette, after going over a great many of the Southern California orchards of Santa Barbara Seedlings and the Oregon French seedling orchards. In none of these places did we see as uniform, excellent and reliable a product as that in the Vrooman Grafted Franquette Orchard, at Santa Rosa. Accordingly, we obtained grafts from the best trees of this orchard, and grafted-over about 70 large black trees to Franquette. And it is from only the heaviest bearing of these large grafted trees that we get our scions for the orchard and nursery trees. We cut our grafts long, so that we can select the strongest growing bud on each one to form the nursery tree. In budding, every bud is used, weak or strong. For this

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Two years after transplanting according to our new method. The tree was a one year old Royal when planted.

reason we prefer grafting to budding. After a great deal of experiment and practice, we have originated and perfected a method of grafting the walnut, that gives an almost perfect stand, (almost a necessity in order to enable us to afford the rigid selection of both root and graft as above described), makes a perfectly smooth union, and does this the first year. By a very simple device, we make it possible for the purchaser to have his tree planted just as it stood in the nursery, with reference to the points of the compass. We believe there is considerable merit in doing this. For it is common knowledge to grafters and woodsmen that the bark on the south side of a tree, is thin and the bark on the north side is thick. Now, it stands to reason, that if nature makes thin bark to withstand the sun, and thick bark to withstand the cold, that it is a wise thing in planting the tree, to so plant it that its thin bark will face the south, and its thick bark will face the north, just as it did in the nursery. We think a great deal of sunburn on young trees, may be due to the absolute lack of knowledge on this point. Last year, out of a thousand of our trees sold to an orchardist of our county, and grown exactly according to our planting directions, only one failed to grow, and grow well.

A walnut grove should ultimately stand from forty to sixty feet apart, depending on the stock, the land, and the age of the trees, or from twenty-seven to twelve trees to the acre, instead of from one hundred and eight to seventy-six, as in the case of fruit trees. Owing to our selection, and the expense every year in trying out new roots and nuts, as well as the loss in nuts occasioned from our taking scions from our heaviest bearing trees, we have to ask from \$90.00 a hundred to \$180.00 a hundred for our selected trees. This may seem a high price, but when the few trees

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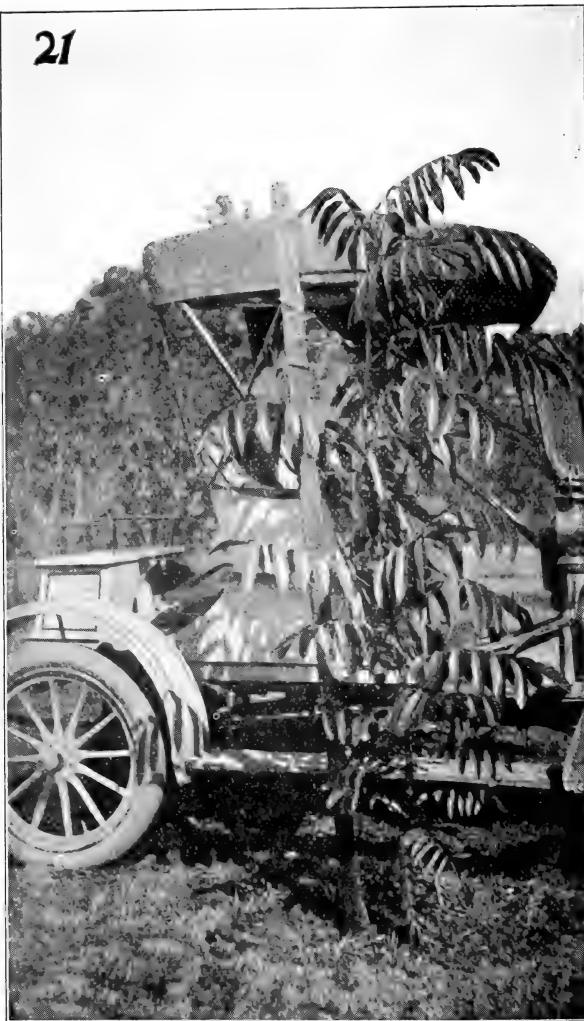
Two year old M. N. Royal Seedling. Same as tree 2 in print 3.

to the acre, and the small expense in planting, pruning, and after care is considered, the price is cheap as compared with fruit trees in general. Previously, our prices were a little lower than those of other nurseries, as we did not ask what we could GET, but what would pay a fair profit on the care and selection which we exercised in growing our trees. This year, our prices, though the same as always, are a trifle higher than some of the nurseries. We expect to keep these prices as long as we grow trees, for it costs us just as much to grow trees one year as another, and we believe there will always be a demand for the grade of tree we grow as long as walnuts are planted.

Now, will the planter please consider with us some hard business facts. Isn't it usually true that a cheap price buys a cheap article? Doesn't it usually cost money, labor and experience to produce something of the best quality? You pay from fifty to six hundred dollars an acre for bare land suitable for walnuts. On that land you give from 1600 to 3600 square feet to each tree, or from two dollars to twenty-two dollars to each tree. Do you think you can get a tree too good for that investment, and to occupy that much land? If you plant a poor tree in good land aren't you about as wise as the rich, indulgent father who tries to pin a fifty thousand dollar education on a fifty-cent boy, and won't you get about the same results? We leave these questions for your answer.

By double planting, much quicker profits can be realized and mistakes rectified. It is done as follows: Plant the orchard as it is ultimately to stand with first grade trees. In the center of the exact square formed by each four of these, plant a cheaper grade tree, as shown in the cut.

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Oct. 10, '09 Imperiale Walnut Orchard. One year from planting,  
two years from graft and three years from seed of the root. What  
can be done with a "Royal" root grafted to "Paradox" and planted  
by our new system.

1	1	1	1	1
2	2	2	2	
1	1	1	1	1
2	2	2	2	
1	1	1	1	1
2	2	2	2	
1	1	1	1	1

By using the diagonal swaths left, quite a part of the land can be used for interplanting vegetable crops, but should you do so, be sure and fertilize such inter crops, so as not to impoverish the soil for the future great, spreading walnut trees that will soon take all the land. Until they interfere, you have two sets of trees bearing nuts and when they inter-branch, and you have to remove the weaker trees, you will have some exceedingly valuable timber to sell. If the mistake of planting out a seedling orchard has been made, it can be rectified by interplanting with grafted trees, only, in this case, of course, the best grade trees are to be used, as they will form the future orchard.

The planting time of the Franquette should be as soon after the leaves fall off the nursery trees as possible, and when the tree is thoroughly dormant. Plant-



One year's growth of one of our nursery trees, planted according to our method.

ing may then be as early some seasons as Nov. 15th, and extend as late as April 15th. We say as early as possible, because in our numerous experimental transplanting we find that though the Franquette and Mayette tops do not start out until about the middle of April or the first of May, yet the roots on which we have grafted them will throw out rootlets all during the winter, so that early planting will give the root a good hold on the soil and insure the graft making a good growth when its time comes to grow.

We advertise the Franquette only, because at present, after thoroughly testing it out, and comparing it on the same ground and in the same climate with some thirty-one varieties we consider it the best, and it is what we are grafting most heavily in our own orchards. These include four meritorious varieties of imported Mayette (one of which will certainly be introduced in a few years, if it holds up its good record), San Jose Mayette, Placentia, Meylan, Bijou, Parisienne, Prize, Rush, Knap, Pne, etc. If you like any of these better than the Franquette, or have any seedling tree of which you can obtain grafts, we can furnish you trees of them on our rapid growing roots, by your ordering a year in advance.

In conclusion let us state our proposition:

We have specialized on walnuts, we graft but the one variety, the Franquette, so that we can guarantee our trees are true to name, we have rigidly selected for quality all along the line, and we have gathered together practically all the root stocks and edible varieties of the walnut family under the same soil and climatic conditions for the purpose of comparison, and in the Grafted Franquette we are offering what seems to us the best that has yet been proven out commercially, all things considered.

**I**



Three year old transplanted Franquette tree, which was two years old when planted. Selected Royal root.



**Press of V. S. HILLIS CO., San Jose**